on request. The materials provide the information the school media specialist needs to present a PeachStar workshop to his or her faculty.

- Conducts annual PeachStar Program Screenings. Via satellite PeachStar presents many hours of excerpts from new quality instructional programming selected at First View and from other sources. All of the state's educators are invited to preview the programming and vote on the series they want PeachStar to offer in the coming school year. Multiple airings of the Screening are scheduled for educators' convenience, and votes are registered electronically. PeachStar purchases as many of the teacher choices as our budget allows.

PeachStar Education Services Division provides extensive, quality, video-based, satellite- delivered instructional programming and many support services to educators, students and all learners throughout Georgia. In only six years the Division has become one of the nation's premiere providers of such services.

K-16 Programming

Professional Development

PeachStar's Original Instructional Resources

Every year, thousands of hours of programming are distributed to Georgia schools over the PeachStar Satellite Network. Much of that programming is acquired from leading national producers of video-based instructional resources. In addition, PeachStar has produced several of its own original series, which are now widely used in schools in Georgia and in other states as well. We are proud of the awards and other recognitions PeachStar productions have received from professional organizations. We are even more proud of the positive responses we have received from Georgia educators and students.
Please review the links to the left for an in-depth look at PeachStar's original educational resources.

welcome center

Professional Development

PeachStar also produces and distributes professional development and other informative programming for state agencies and private organizations.

Professional Development

- **The E-Rate Conference**. In October 1999 PeachStar produced and aired nationwide a two- day teleconference that made schools aware of how to apply for telecommunications services at discounted rates. Sponsored by BellSouth and the FCC.
- **The Institute for Continuing Legal Education**. For the past three years we have produced and aired teleconferences that help attorneys meet their annual continuing professional education requirements. Sponsored by the Georgia Institute for Continuing Legal Education.
- **Sexual Harassment in the Workplace**, a telecourse for employees of Fulton County Schools.
- **PeachStar Professional Development Institutes**, a series of staff development programs that show teachers and media specialists how to access and utilize resources and services provided by PeachStar Education Services.
- **New School Days: Block Scheduling**, a teleconference for Georgia educators, students and parents, hosted by the State Superintendent of Schools and the Chairman of the State Board of Education. Sponsored by the Georgia Department of Education.
- **Reading First**, a professional development series for Georgia teachers. Sponsored by the Georgia Department of Education.
- **Raising Expectations**, an introduction to the Georgia Board of Education's revised Quality Core Curriculum. Sponsored by the Georgia Department of Education.
- **Nutrition Teleconference**, a program informing nutritionists in Georgia public schools about recent changes in federal regulations. Sponsored by the Georgia Department of Education.
- **Building Healthier Student Bodies**, a nine-part nutrition series for Georgia school nutritionists and other food service staff. Sponsored by the Georgia Department of Education.

welcome center

All About PeachStar Production Services Original Programming

Georgia Stories

Professional Development

Georgia Stories

Visit the web site!

All eighth grade students in Georgia public schools are required to take a course in Georgia history. To support that required course, PeachStar produced Georgia Stories I and Georgia Stories II, two series of video programs that trace the history and economic development of our state. The series illustrate Georgia's history with archival film and photographs; interviews with Georgia residents, historians and authors; current documentary footage; and dramatic recreations of events. Curriculum Guides are available for teachers who choose to use the programs to supplement and enhance their regular classroom activities at the 8th grade levels. Some 4th grade teachers also use the series, and a Curriculum Guide designed for use at that grade level is available.

Georgia Stories airs on PeachStar's satellite channels and on Georgia Public Television (GPTV). Go to PeachStar's searchable database to find out which Georgia Stories episodes are currently scheduled to air on PeachStar's satellite channels and on GPTV. Boxed sets of the series are available for purchase.

For more information or to order your Curriculum Guide or boxed set of videos, call 1-888-501-8960, ext. 2550 or call 404-685-2550 in the Atlanta area.

Georgia Stories has won state, national and international awards for excellence in educational programming.

Click here to access the Georgia Stories: History Online instructional web site.

C

PTFP Grant Application

DISTANCE LEARNING

Georgia Public Broadcasting
February 2001

PTFP Grant 2001

Program Narrative

PART V -- PROGRAM NARRATIVE
PTFP APPLICATION / DISTANCE LEARNING

GPB's "DIRECT-PC RURAL BROADBAND" approach, utilizing GPTV, offers Internet Services via Digital Television (DTV) operations to Georgia's technologically underserved schools. The purpose of this application is to enable the delivery of multi-media content using the digital transmission infrastructures that Georgia Public Broadcasting (GPB) will be building. This application addresses utilizing high-speed bandwidth – outbound – with lower-speed return service, similar to the "Direct-PC" business model. It focuses on a rich-media web portal built by three state of Georgia education entities and plans to make use of this digital infrastructure to deliver this media to teachers and students throughout Georgia.

"Internet Tunneling" accepts a slow speed dial-up Internet Service Provider (ISP) connection user inquiry, and returns the WWW session over the GPTV DTV transmitter of service to the rural user's own PC. A Windows NT server at the DTV transmitter encapsulates the Internet Protocol (IP) over the DTV MPEG/ATSC signal. Companion PC cards provided to schools will receive/decode the high-speed data.

This request is being made under the Broadcast Equipment Replacement, Augmentation category, Special Applications Priority.

Evaluation Criterion #1 / Applicant Qualifications

The Georgia Public Telecommunications Commission (GPTC) was created in 1981 to

- ensure that the citizens of Georgia would benefit to the highest possible degree from the state's public broadcasting resources
- implement new technological advances
- implement fundraising and marketing activities to support the statewide network

GPTC was formed through the merger of the Georgia Educational Network, an affiliation of nine stations operated by the Georgia Department of Education, and WGTV. The Foundation for Public Broadcasting in Georgia, Inc., a 501(c)(3) corporation, was created in 1982 to facilitate fundraising and marketing activities in the private sector.

Georgia Public Broadcasting (GPB) is the program service of GPTC. the state authority that holds its licenses. GPB's main service divisions are

- Georgia Public Television (GPTV), a nine-station statewide public television network
- Georgia Public Radio (GPR), a fourteen-station public radio statewide network
- PeachStar Education Services, which delivers educational programs via satellite to every public school, technical institute, college and university, and regional library in the State of Georgia.

Construction of GPB's new headquarters and state-of-the-art production center in 1997 was made possible by the support of the Governor and the Georgia General Assembly using state lottery proceeds. GPB's headquarters are in Atlanta, Georgia on approximately three acres, adjacent to the new Georgia Center for Advanced Telecommunications Technology (GCATT). With the close proximity of Turner Broadcasting, AT&T, BellSouth, Georgia Tech, Georgia State University, and GCATT, the location is quickly emerging as the heart of

telecommunications research and innovative telecommunications technology in Georgia.

The new GPB facility has approximately 227,000 square feet on five floors. With its digital technology capabilities, it is one of the most technologically advanced public television and radio facilities in the nation. The building's main features include three large production studios, one with an audience seating capacity of 250, six smaller studios that are equipped with robotic cameras and small control rooms, three major post edit suites, and one major audio production suite. Three talk/production studios and one live performance studio are dedicated to Georgia Public Radio.

Georgia Public Television (GPTV)

Georgia Public Television (GPTV) broadcasts 24 hours a day, Monday through Saturday, and 20 hours on Sunday. GPTV obtains most of the programming for which public television is best-known from PBS, the national public broadcasting program service. However, GPTV's own productions are an increasingly important part of the program schedule. For instance, GPTV created the ***Georgia Legacy Series***, an ongoing series of programs that tell the stories of Georgia's unique heritage, culture, people, and beautiful surroundings. As of January 1, 2000, distance learning programs are broadcast after 12:00 AM so that the programs may be recorded for classroom use at a later time.

The central television network operations in Atlanta transmits GPTV's programs to the nine transmitter sites:

- Albany/Pelham WABW / 14
- Atlanta/Athens WGTV / 8
- Augusta/Wrens WCES / 20
- Columbus/Warm Springs WJSP / 28
- Chatsworth/Dalton WCLP / 18
- Dawson/Americus WACS / 25
- Macon/Cochran WDCO / 29
- Savannah/Pembroke WVAN / 9
- Waycross/Valdosta WXGA / 8

PeachStar Education Services

PeachStar Education Services provides programming, curricula materials, teacher training and services delivered via the PeachStar Satellite Network and Georgia Public Television, to students of all ages throughout the state and nation. Each year, PeachStar broadcasts hundreds of hours of instructional programming designed to be taped for use in the classroom and provide GED, college-level telecourses, and staff development programming for educators at all levels. Printed teachers' guides and other multimedia material, including web pages, are also available to accompany PeachStar programming.

Evaluation Criterion #2 / Project Objectives

The objective of this project is to use the digital television infrastructure that is being built to meet FCC requirements and deadlines to also serve as a means of delivering digital multi-media content to schools via datacasting. For the past three years, the PeachStar education division of

Georgia Public Broadcasting (GPB) has been working with the Department of Education's Georgia Learning Connection (GLC) unit to build a resource of lesson plans and supporting material for teachers and students. Both of these state entities have contracted with a third party, CEISMC (a Georgia Institute of Technology organization) to design and build this web portal. A significant portion of the lesson plans' material is now available on the GLC's web site – www.glc.k12.ga.us. This material addresses the 7,000+ Quality Core Curriculum (QCC) standards that are required to be taught from kindergarten through twelfth grade within all of the different disciplines addressed during that learning period.

The Georgia Learning Connections web link database contains links to Internet resources that are connected to individual QCC standards. Georgia teachers worked with PeachStar to locate, evaluate (based on selected criteria), and connect the exact resource that will help teach an individual QCC standard. The web link resources are clearly organized and easy to search. Both teachers and students can use them. GPB will be adding video and audio content as additional web resources for use by teachers and students. As stated in the first paragraph of Exhibit E, the purpose of this correlation project is to correlate all of the video holdings of GPB with educational standards at the Pre-K, K-12, Technical, Higher Education, National, and Adult and Continuing Education levels. In the process, the second purpose is to create a national model system wherein educators easily can identify and access educational video programming that helps their students meet performance expectations.

Since June 2000, one hundred certified Georgia teachers with subject and grade level expertise have worked with PeachStar for a total of 3,289 hours to correlate 306 hours of programming in 493 episodes to the QCC. The second phase of designing and of beginning to "ingest" that video for storage is funded and expenditures have already begun to be made. This grant request addresses the third phase of using the infrastructure to deliver this content to rural educators and students – including home schools. This collaborative development between Georgia Public Broadcasting, Georgia Learning Connection, and CEISMIC represents a "walled garden" portal. Making this portal accessible to the rural communities that do not have the necessary bandwidth for the foreseeable future is the heart of this grant application.

GPTV is currently beginning deployment of its federally mandated DTV transmission service to all 9 of its broadcast TV transmitter sites. These will be rolled out over the next three years at 2 to 4 per year to meet the May 2003 FCC deadline. Our first DTV transmitters will be in the Chatsworth, Cochran-Macon and Athens-Atlanta areas. These are scheduled and funded to be on the air in early calendar year 2002. These DTV data payload(s) will carry the "Direct-PC Rural Broadband" services enabled by this grant application. The 500 PC-based DTV receiver cards are matched to the combined school population in these areas. These schools would receive this signal off-air just as they currently do with GPTV analog service. These rural schools mostly have slow speed ISP dial up services which, when augmented by this equipment/system configuration, will enable them to enjoy much improved data rates and thus improved downloading operations.

Evaluation Criterion #3 / Urgency
This funding represents a significant portion of the final phase of delivery video and audio content to the education community. With the schedule of converting to a completely digital transmission facility set, the infrastructure to use this delivery mechanism that addresses the rural broadband necessity will be in place during this funding's cycle.

GPTV's DTV service will both provide an immediate replication/transition of our current NTSC analog service, as well as a capability for broadcast data services. WWW interaction is a growing need of all schools and a particularly frustrating point for rural locations. This "Direct-PC Rural Broadband" capability allows immediate service into these locations where the commercial ADSL and Cable Modems, etc. are just not available. Left alone, these schools are simply not able to participate in the ever-emerging WWW FTP and STREAMING advances and data access benefits. This is a true "quick start" project benefit.

Evaluation Criterion #4 / Technical Qualifications
The majority of the equipment costs are the receiver cards or receiver boxes. The receiver boxes are USB boxes instead of PC PCI cards so that the end users do not have to open up their PC's to use this device. Its purpose is to receive the digital signal from a normal antennae then store that signal on the hard drive, play out that streamed media on the PC screen and/or send that same signal to a television display.

The eligible equipment shown in the equipment list is in actuality where the WWW is colliding with broadcast television. As this is also happening at the remote school location, it needs to happen at the broadcast emanation point. The remote PC based DTV receiver cards / boxes come from the evolving consumer electronics marketplace but are equipped to handle the data transmission duties directly into the host PC. This circumvents the often unreliable and slow performance of VCR tapes from video only broadcasts. Consumers have found this automatable access a resounding success in the PVR (personal video recorder – TiVo) products for entertainment. GPTV will offer a similar, compelling, and user-friendly operation in the remote PC operator/student/teacher.

GPTV's combined talents in its broadcast video and IT operations are fully focused on this initiative to bring timely and highly desired internet services to rural areas.

Evaluation Criterion #5 / Financial Qualifications
Funds for the matching funds requirement will be taken from GPB's cash reserves from FY2000.

Evaluation Criterion #6 / Involvement of Women and Minorities
The Georgia Public Telecommunications Commission has a mandate from the state to provide quality programming that educates, informs and entertains all Georgia citizens. We have a long tradition of including women and minorities on the Board of Directors and in all levels of management. Of course, the taxpayers of Georgia are the actual "owners" of this organization. We respect that fact and honor the obligation it places upon us to ensure that we continually

work to provide the radio, television, and educational programming that meets the needs and interests of our diverse population of more that 7 million Georgians.

The Georgia Public Telecommunications Commission has a nine-member Board of Directors that sets policy and direction for the organization. The Board includes three females and one African American. The Leadership Team of the organization includes an Executive Director, a Deputy Director, Director of Government Relations, and the directors of eight operating divisions. Currently, this team consists of three women and two African American males. An Organization Chart is attached as documentation. At the next level of management, the percentage of women and minorities is about 66 percent of the total. In the television programming area, the acting head of program services--GPTV Program Manager, is a woman, and her current staff consists totally of women and minorities. In the production area, our two Executive Producers are women. GPB has six full-time producers on staff; of those three are women and two are African American males. Even in the Engineering Division (a field traditionally dominated by males), we have an African American female broadcast engineer as Master Control Supervisor. GPTC is proud of its record of hiring and promoting staff that reflect the diverse communities of our state.

We are fortunate to serve a state with a diverse population. Approximately 27 percent of the citizens are African American; the Hispanic and Asian populations are growing dramatically and now constitute about 3 percent of the state's population. We are a large state geographically; and, although many of the minority populations are concentrated in metro areas, there are significant numbers of minorities in all parts of the state. Our programming is designed to serve all of our listeners and viewers. It reflects the diverse interests of all Georgians, including minorities.

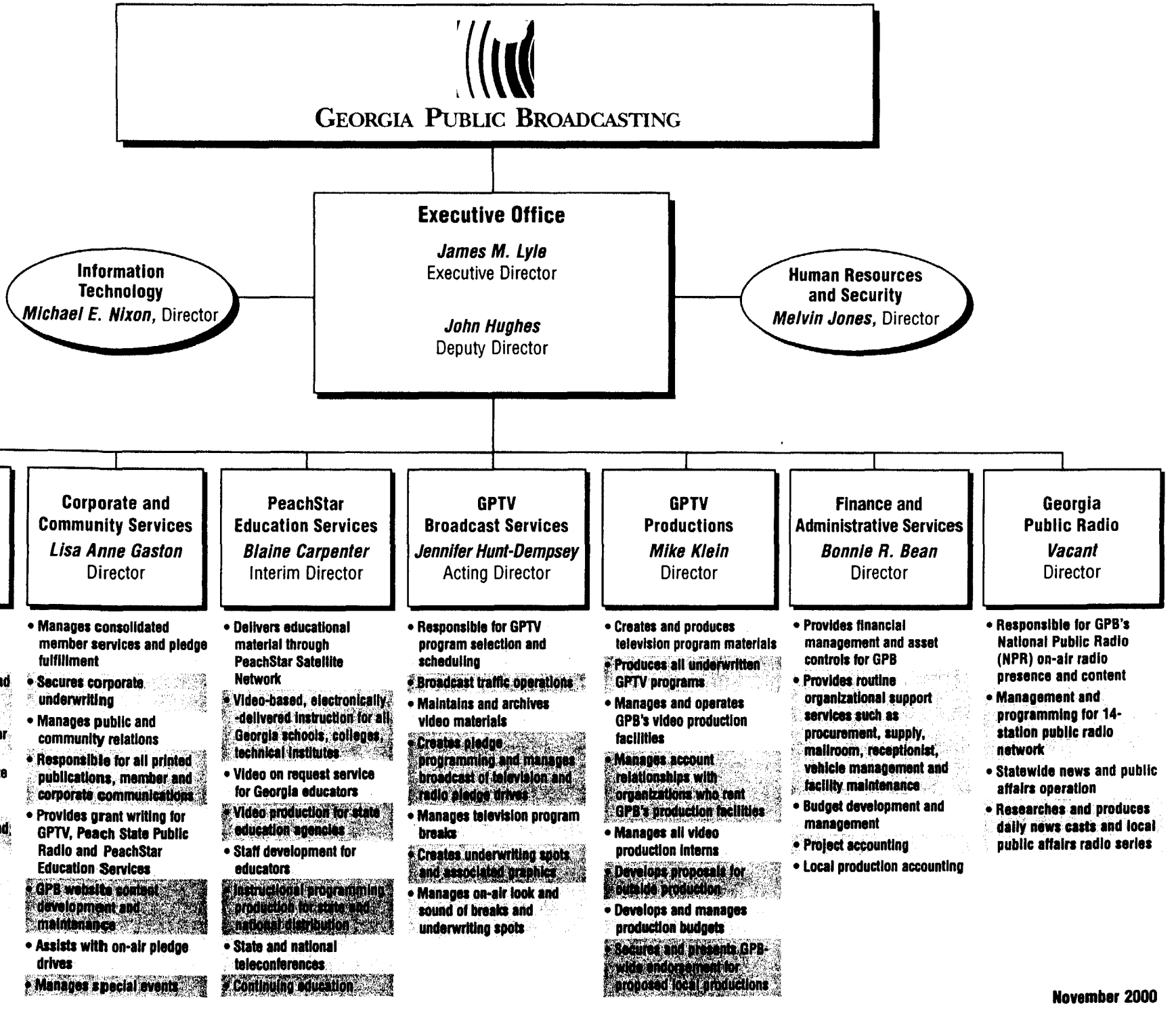
In the production area, our mission is to create and produce quality programs that celebrate the rich and diverse culture and history of the people of Georgia and explore the issues that affect our citizens. We have produced programming such as ***Race Relations in Georgia: A Dialogue; Carols from Atlanta: The 70th Anniversary Morehouse Spelman Christmas Concert;*** and ***Jessye Norman: A Holiday Homecoming;*** that are of particular interest to our minority audiences, as well as the entire state. GPB's radio programming has been recognized by the Pioneer Black Journalist Awards. In 1999, Georgia Public Radio picked up four first place awards for outstanding news and feature reporting. In all of our local productions we work to ensure that we include individuals, groups and topics that reflect the demographics of our state.

As an active corporate citizen of our state as well as a state authority, we are also involved in partnerships with several community organizations, legislative bodies and other broadcast and educational institutions that share our mission as well as serve the needs and interests of women and minorities. We are involved in an extensive partnership with Clark Atlanta University, the nation's largest United Negro College Fund institution. The collaboration initiatives include airing joint programming on our radio and television stations, co-production of programming for both television and radio and providing internship opportunities in all production, development

and technical areas for Clark Atlanta students. GPB also has developed an internship program in partnership with NPR's ***Performance Today*** for minority students interested in classical music. The students spend one semester working with Georgia Public Broadcasting and one semester working with ***Performance Today*** in Washington, D.C.

Through the educational programming Georgia Public Broadcasting provides with our multiple delivery systems, GPB serves the needs of nontraditional students, a high percentage of whom are women and minorities. We are continually looking for ways to expand the options for these learners. We have recently expanded our broadcast day of Georgia Public Television to 24 hours, reserving the early morning hours solely for educational programming. We also provide educational programming via two television channels a day to students in youth detention centers, colleges, universities, public libraries and work sites. Many of these are nontraditional learners. Much of our educational programming will soon be available over the Internet through a partnership with Georgia GLOBE, the state's online learning initiative.

Other organizations that GPTC has partnered with include the Georgia Commission on Women, the Women's Legislative Caucus, the Georgia Coalition of Black Women, the Georgia Legislative Black Caucus, the Girl Scouts, ATLAS (a mentoring program pairing professional women with middle school and high school girls) as well as the six historically black colleges in Atlanta, which are located near our headquarters facility. For two years, Georgia Public Broadcasting has been a sponsor and host of the *Women Making A Mark* fund-raiser for the Atlanta Women's Fund, which honors metro Atlanta's 20 most powerful women who have made a positive mark on the community.


GEORGIA PUBLIC BROADCASTING
Executive Office
James M. Lyle
Executive Director
John Hughes
Deputy Director
Information Technology
Michael E. Nixon, Director
Human Resources and Security
Melvin Jones, Director
Engineering
Mark G. Fehlig
Director
• Provides technical and engineering maintenance services for GPB
• Operates Master Control and delivers broadcast signals for GPTV, Peach State Public Radio and PeachStar Education Services
• Manages all transmitter site facilities and broadcast operations
• Maintains FCC technical and public files
• Provides technical support and maintenance services for GaRRS
Corporate and Community Services
Lisa Anne Gaston
Director
• Manages consolidated member services and pledge fulfillment
• Secures corporate underwriting
• Manages public and community relations
• Responsible for all printed publications, member and corporate communications
• Provides grant writing for GPTV, Peach State Public Radio and PeachStar Education Services
• GPB website content development and maintenance
• Assists with on-air pledge drives
• Manages special events
PeachStar Education Services
Blaine Carpenter
Interim Director
• Delivers educational material through PeachStar Satellite Network
• Video-based, electronically -delivered instruction for all Georgia schools, colleges, technical institutes
• Video on request service for Georgia educators
• Video production for state education agencies
• Staff development for educators
• Instructional programming production for state and national distribution
• State and national teleconferences
• Continuing education
GPTV Broadcast Services
Jennifer Hunt-Dempsey
Acting Director
• Responsible for GPTV program selection and scheduling
• Broadcast traffic operations
• Maintains and archives video materials
• Creates pledge programming and manages broadcast of television and radio pledge drives
• Manages television program breaks
• Creates underwriting spots and associated graphics
• Manages on-air look and sound of breaks and underwriting spots
GPTV Productions
Mike Klein
Director
• Creates and produces television program materials
• Produces all underwritten GPTV programs
• Manages and operates GPB's video production facilities
• Manages account relationships with organizations who rent GPB's production facilities
• Manages all video production interns
• Develops proposals for outside production
• Develops and manages production budgets
• Secures and presents GPB-wide endorsement for proposed local productions
Finance and Administrative Services
Bonnie R. Bean
Director
• Provides financial management and asset controls for GPB
• Provides routine organizational support services such as procurement, supply, mailroom, receptionist, vehicle management and facility maintenance
• Budget development and management
• Project accounting
• Local production accounting
Georgia Public Radio
Vacant
Director
• Responsible for GPB's National Public Radio (NPR) on-air radio presence and content
• Management and programming for 14-station public radio network
• Statewide news and public affairs operation
• Researches and produces daily news casts and local public affairs radio series
November 2000

D

DTV PFRM APPLICATION AND VHF INTERFERENCE STUDIES FOR THE DIGITAL TELEVISION BROADCAST STATION WGTV-DT TO OPERATE ON DTV CHANNEL 4 WITH AN ERP OF 3 KW AT AN ANTENNA HEIGHT RADIATION CENTER OF 304 METERS ABOVE AVERAGE TERRAIN ATHENS, GEORGIA

(GEORGIA PUBLIC TELECOMMUNICATIONS COMMISSION)

KESSLER & GEHMAN ASSOCIATES, INC.
TELECOMMUNICATIONS CONSULTING ENGINEERS

KGA

20010123

Prepared by William T. Godfrey

507 N.W. 60th Street, Suite C
Gainesville, Florida 32607

SECTION V-D - DTV BROADCAST ENGINEERING DATA	FOR COMMISSION USE ONLY File No. _____ SSB Referral Date _____ Referred By _____
Name of Applicant **GEORGIA PUBLIC TELECOMMUNICATIONS COMMISSION**	Call Letters (if issued) **WGTV**

Complete Questions 1-5 of the Certification Checklist and provide all data and information for the proposed facility, as requested in Items 1-22, below. If an item is not applicable, enter N/A.

Certification Checklist: A correct answer of "Yes" to all of the questions below will ensure an expeditious grant of a construction permit. An answer of "No" will require additional evaluation of the applicable information in this form before a construction permit can be granted.

1 The proposed DTV facility complies with 47 C.F.R. Section 73.622 in the following respects:

(a)	It will operate on the DTV channel for this station as established in 47 C.F.R. Section 73.622.	☐ Yes ☒ No
(b)	It will operate from a transmitting antenna located within 5.0 km (3.1 miles) of the DTV reference site for this station as established in 47 C.F.R. Section 73.622.	☒ Yes ☐ No
(c)	It will operate with an effective radiated power (ERP) and antenna height above average terrain (HAAT) that do not exceed the DTV reference ERP and HAAT for this station as established in 47 C.F.R. Section 73.622.	☒ Yes ☐ No

2. The proposed facility will not have a significant environmental impact, including exposure of workers or the general public to levels of RF radiation exceeding the applicable health and safety guidelines, and therefore will not come within 47 C.F.R. Section 1. 1307. ☒ Yes ☐ No

3. Pursuant to 47 C.F.R. Section 73.625, the DTV coverage contour of the proposed facility will encompass the allotted principal community. ☒ Yes ☐ No

4. The requirements of 47 C.F.R. Section 73.1030 regarding notification to radio astronomy installations, radio receiving installations and FCC monitoring stations have either been satisfied or are not applicable. ☒ Yes ☐ No

5. The antenna structure to be used by this facility has been registered by the Commission and will not require reregistration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely effect safety in air navigation and this structure qualifies for later registration under the Commission's phased registration plan, OR the proposed installation on this structure does not require notification to the FAA pursuant to 47 C.F.R. Section 17.7. ☒ Yes ☐ No

Application Data:

1. Channel
   (a) DTV Channel No. **4**
   (b) Associated analog TV station channel no., if any **8**

2. Principal community to be served:

City or Town	State
ATHENS	**GA**

3. Effective radiated power (average power): *(in the main lobe of radiation, if directional)* **3** kW

4. Height of antenna radiation center above average terrain (HAAT): *(to the nearest meter)* **304** meters

Section V-D -D TV BROADCAST ENGINEERING DATA (Page 2)

5. **Purpose of Application:** *(check appropriate boxes)*

☐ Construct a new (main) facility	☐ Construct a new auxiliary facility
☒ Modify construction permit for main facility	☐ Modify construction permit for auxiliary antenna
☐ Modify licensed main facility	☐ Modify licensed auxiliary antenna

If purpose is to modify, indicate the nature of change(s) by checking appropriate box(es) and specify the file number(s) of the authorizations affected.

☐ Antenna supporting structure height	☒ Effective radiated power
☒ Antenna height above average terrain	☒ Channel
☐ Antenna location	☒ Antenna system
☐ Other (summarize)	

File Number(s) **BPEDT-00419AAR**

---

6. **Exact location of transmitting antenna**

(a) Give address, city/state or if no address, specify distance and bearing relative to the nearest town or landmark.

2 ROBERT E LEE BLVD ATOP STONE MOUNTAIN, STONE MOUNTAIN, GA

(b) Geographical coordinates *(to nearest second)*. If mounted on element of an AM array, specify coordinates or center of array. Otherwise, specify tower location. Specify South Latitude and East Longitude where applicable; otherwise, North Latitude or West Longitude will be presumed. *(The Commission requires coordinates based on NAD 27.)*

Latitude	33 °	48 '	18 "	Longitude	84 °	08 '	40 "

7. (a) Elevation *(to the nearest meter)*

(1) of site above mean sea level; **496** meters

(2) of the top of supporting structure above ground (including antenna, all other appurtenances, and lighting, if any); and **123** meters

(3) of the top of supporting structure above mean sea level [(a)(1) + (a)(2)]. **619** meters

(b) Height of radiation center: *(to the nearest meter)*

(1) above ground; and **85** meters

(2) above mean sea level [(a)(1) +(b)(1)]. **581** meters

8. Attach as an Exhibit sketch(es) of the supporting structure, labeling all elevations required in item 7 above. If mounted on an AM directional array element, specify heights and orientations of all array towers, as well as location of any FM radiator.

Exhibit No. **3***

*** SEE ENCLOSED ENGINEERING TECHNICAL STATEMENT** **2/1/2001**

9. **Antenna**

(a) Manufacturer **DIELECTRIC** (b) Model No. **THB-C3-5/15-1**

(c) Is a directional antenna proposed? ☒ Yes ☐ No

If Yes, specify major lobe azimuth(s) **270** degrees True and attach as an Exhibit all data specified in 47 C.F.R. Section 73.625(c). Exhibit No. **1-9***

(d) Is electrical beam tilt proposed? ☒ Yes ☐ No

If Yes, specify **0.50** degrees electrical beam tilt and attach as an Exhibit all data specified in 47 C.F.R. Section 73.625(c). Exhibit No. **1-9***

(e) Is mechanical beam tilt proposed? ☐ Yes ☒ No

If Yes, specify **N/A** degrees mechanical beam tilt toward azimuth **N/A** True and attach as an Exhibit all data specified in 47 C.F.R. Section 73.625(c). Exhibit No. **N/A**

(f) The proposed antenna *is: (check only one box)*

☐ Horizontally polarized ☒ Circularly polarized ☐ Elliptically polarized ☐ Other: _____

10. Will the antenna be mounted on an antenna structure which has been registered with the Commission, to include the proposed antenna installation? ☒ Yes ☐ No

If Yes, provide the seven digit registration number and, unless item 11 also applies, proceed to item 15. **1018776**

11. Has the owner of the antenna structure filed an application for registration with the Commission that will include the proposed facility? ☐ Yes ☐ No ☒ N/A

If yes, provide the date FCC Form 854 was filed and proceed to item 15. **N/A**

12. (if applicable) If the antenna structure is not yet registered but will be under the Commission's phased registration plan, has the FAA previously determined that the structure would not adversely affect safety in air navigation? **N/A** ☐ Yes ☐ No ☒ N/A

If Yes. proceed to item 15.

13. Antenna structure will be shielded by existing structures of a permanent and substantial character or by natural terrain or topographic features of equal or greater height, and would be located in the congested area of a city, town or settlement where it is evident beyond all reasonable doubt that the structure is so shielded that it will not adversely affect safety in air navigation. and therefore does not require registration. ☐ Yes ☐ No ☒ N/A

If yes, submit as an Exhibit a detailed explanation and/or diagram to support your claim and skip to item 15. Exhibit No. **N/A**

2/13/2001 ***SEE ENCLOSED ENGINEERING TECHNICAL STATEMENT.**

Section V-D -D TV BROADCAST ENGINEERING DATA (Page 4)

14. Antenna structure does not otherwise meet FAA Notification criteria as defined under 47 C.F.R. Section 17.7 and therefore does not require registration. ☐ Yes ☐ No ☒ N/A

If Yes, give reason below.

N/A

15. Is the supporting structure the same as that of another station(s) or proposed in another pending application(s)? ☒ Yes ☐ No

If Yes, give call letter(s) or file number(s) or both, **WGTV-TV (BMLET-890727KG)**

16 Does the application propose to correct previous site coordinates? ☐ Yes ☒ No

If Yes, list old coordinates.

Latitude ° ' "	Longitude ° ' "

17. Attach as an Exhibit a topographic map that shows clearly, legibly, and accurately, the location of the proposed transmitting antenna. This map must comply with the provisions of 47 C.F.R. Section 73.625(b). The map must further display clearly and legibly the original printed contour lines and data as well as latitude and longitude markings, and must bear a scale of distance in kilometers.

Exhibit No. **10***

18. Attach as an Exhibit a map *(Sectional Aeronautical Chart or equivalent)* which shows clearly, legibly, and accurately, and with the original printed latitude and longitude markings and a scale of distance in kilometers:

Exhibit No. **11***

(a) the proposed transmitting location, and the radials along which profile graphs have been prepared;
(b) the DTV coverage contour as established in 47 C.F.R. Section 73.625(b); and
(c) the legal boundaries of the principal community to be served.

19. Terrain and coverage data (to be calculated in accordance with 47 C.F.R. Section 73.625(b))

Source of terrain data: *(check only one box below)*

☐ Linearly interpolated 30-second database (Source: _____)

☒ Linearly interpolated 3-second database (Source: **DEFENSE MAPPING AGENCY**)

☐ 7.5 minute topographic map _____

☐ Other *(briefly summarize)* _____

***SEE ENCLOSED ENGINEERING TECHNICAL STATEMENT.**

2/1/2001

Radial bearing (degrees True)	Height of radiation center above average elevation of radial from 3m to16m (meters)	Predicted distance to the DTV Coverage Contour (kilometers)
*76°	306.3	83.9
0°	285.6	91.8
45°	306.3	84.5
90°	311.9	84.9
135°	343.6	86.6
180°	320.4	94.2
225°	308.9	95.6
270°	285.2	92.2
315°	275.4	93.1

*Radial through principal community, if not one of the major radials. This radial should NOT be included in the calculation of HAAT.

20. Does the proposed facility satisfy the interference protection provisions of 47 C.F.R. Section 73.623(a)? (Applicable only if **Certification Checklist** items I (a), (b), or (c) are answered "No.") ☒ Yes ☐ No

If No, attach as an Exhibit justification therefore, including a summary of any related previously granted waivers. Exhibit No. N/A

21. If the proposed facility will not satisfy the coverage requirement of 47 C.F.R. Section 73.625, attach as an Exhibit justification therefore. (Applicable only if Certification Checklist item 3 is answered "No.") Exhibit No. N/A

22. Environmental Statement. *(See 47CF.R. Section 1.1301 et seq.)*

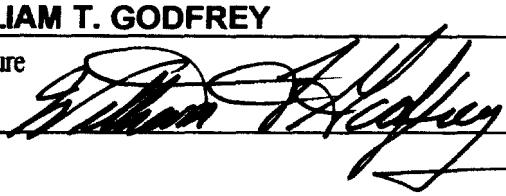
(a) If a Commission grant of this application comes within 47 C.F.R. Section 1.1307, such that it may have a significant environmental impact, submit as an Exhibit an Environmental Assessment required by 47 C.F.R. Section 1. 1 31 1. Exhibit No. N/A

(b) If No, explain briefly why not. **THE PROPOSED CONSTRUCTION WILL HAVE NO SIGNIFICANT ENVIRONMENTAL IMPACT AS DEFINED IN §1.1307 OF THE FCC RULES. ***

(c) Pursuant to OST Bulletin No. 65, the applicant must explain in an Exhibit what steps will be taken to limit the RF radiation exposure to the public and to persons authorized access to the tower site. In addition, where there are multiple contributors to radio frequency radiation, you must certify that the established RF radiation exposure procedures will be coordinated with all Exhibit No. *

CERTIFICATION

I certify that I have prepared this Section of this application on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name (Typed or Printed)	Relationship to Applicant (e.g., Consulting Engineer)
WILLIAM T. GODFREY	**TELECOMMUNICATIONS CONSULTANT**
Signature 	Address (include ZIP Code) **507 NW 60TH ST., SUITE C, GAINESVILLE, FL 32607**
Date **2/1/2001**	Telephone No. (include Area Code) **352-332-3157** **e-mail: godfreyw@bellsouth.net**

ENGINEERING TECHNICAL STATEMENT PREPARED BY WILLIAM T. GODFREY OF THE FIRM KESSLER AND GEHMAN ASSOCIATES, INC., TELECOMMUNICATIONS CONSULTING ENGINEERS IN CONNECTION WITH THE GEORGIA PUBLIC TELECOMMUNICATIONS COMMISSION'S (GPTC) DTV APPLICATION FOR A CONSTRUCTION PERMIT IN SUPPORT OF THE WGTV-DT PETITION FOR RULE MAKING WHICH SEEKS AUTHORIZATION TO AMEND THE DTV TABLE OF ALLOTMENTS IN ORDER TO SUBSTITUTE THE PROPOSED DTV VHF CHANNEL 4 FOR THE ALLOTTED DTV UHF CHANNEL 22 AT THE LICENSED SITE LOCATED IN STONE MOUNTAIN, GEORGIA.

The firm Kessler and Gehman Associates, Inc., has been retained by the Georgia Public Telecommunications Commission (GPTC), Atlanta, Georgia in order to prepare engineering studies and the engineering portion of a digital television (DTV) application for a construction permit in support of the WGTV-DT Petition for Rule Making (PFRM) which respectfully requests and seeks authorization for an amendment of the DTV Table of Allotments by substituting the proposed DTV VHF Channel 4 for the allotted DTV UHF Channel 22 at the licensed site located in Stone Mountain, GA.

Discussion

The GPTC is the licensee of nine NTSC broadcast stations and has been assigned a paired DTV channel for each of the nine stations. The enclosed WGTV-DT application for the GPTC is just one of six PFRM applications requesting a change from its assigned UHF channel to a desired VHF channel. Kessler and Gehman Associates, Inc. initially conducted a detailed spacing study and determined that two of the nine GPTC stations presently would not be able to convert to VHF without causing above *de minimis*[1] interference to one or more applicable surrounding station(s). Of the nine DTV channels allotted to the GPTC, one station was assigned a VHF channel. Therefore, the GPTC is requesting a "Fleet VHF Conversion" of six of its nine broadcast stations in order to utilize improved signal coverage, heavily reduce support structure upgrade expenses, save on equipment and operational costs and continue digital VHF operation on the proposed channels after the DTV transition has ceased.

Authorization of the "Fleet VHF conversion" will equip the GPTC with seven VHF stations and will serve the public interest significantly with huge savings in tax dollars ranging from the substantial amount of money saved during the DTV purchasing/building phase to the magnitude of electrical savings that low power VHF transmitters offer over high power UHF transmitters. Conversion of the two remaining UHF channels to VHF shall be pursued after the DTV transition when spectrum becomes available so that the GPTC can simulcast efficiently on all nine VHF stations to the entire state of Georgia and beyond.

The objective of the enclosed DTV PFRM application is to amend the DTV Table of Allotments as follows: (1) substitute DTV Channel 4 for assigned DTV Channel 22; (2) change effective radiated power (ERP) from assigned 600.2kW to 3kW using a directional antenna (cardioid) with the main lobe oriented toward N270°E; and (3) change the antenna radiation center (R/C) height above average terrain (HAAT) from the assigned 326.0 meters to 304 meters.

[1] *De minimis* interference is defined as interference to such stations affecting less than two percent of the population they serve. Where a station is receiving interference to between eight and ten percent of the population it would otherwise serve, additional interference is considered *de minimis* if it does not cause interference to the station to exceed the ten-percent threshold.

The GPTC is licensed to operate WGTV-TV on VHF, NTSC Channel 8(o) with an ERP of 316kW at an antenna height R/C of 326.0 meters AAT using a nondirectional antenna. The assigned principal community for WGTV is Athens, Georgia and the file number for WGTV-TV is BMLET-19890727KG.

According to the initial allotment plan and reference coordinates (DTV Table of Allotments) set forth in Appendix B of the *Sixth Report and Order* in MM Docket 87-268, FCC 97-115, adopted April 3, 1997, WGTV is allotted UHF, DTV Channel 22 at an antenna height R/C of 326.0 meters AAT and an ERP of 600.2kW in order to replicate its licensed VHF, Channel 8 Grade B Contour.

The GPTC has a construction permit for DTV Channel 22 (file number BPEDT-200000419AAR), which authorizes WGTV to operate with an ERP of 600.0kW at an antenna height radiation of 304.0 meters AAT using a nondirectional antenna. Specifically, the GPTC requests authorization to substitute WGTV-DT Channel 4 in lieu of the WGTV-DT Channel 22 construction permit, and to take any other steps necessary to enable WGTV to construct and ultimately operate its digital facilities on Channel 4.

Transmitter

It is proposed to side-mount a Dielectric model THB-C3-5/15-1 circularly polarized, directional (cardioid oriented at N270E°), VHF, DTV antenna on the existing WGTV-TV support structure owned by the GPTC. The tower is registered with the FCC and has a registration number of 1018776. The support structure is located at 2 Robert E Lee Blvd, atop of Stone Mountain in Stone Mountain, GA. The proposed antenna height radiation center is 85 meters above ground level (AGL). The antenna's highest point will extend to 95 meters AGL and the overall height of the structure will extend to 123 meters AGL as depicted in Exhibit 3's elevation view of the support structure

Interference Studies

The enclosed interference studies were computed using a Pentium Pro, 300 MHz, 128-megabyte, Pentium II processor. The calculations were performed using V-Soft Communication's Probe II, professional signal propagation software and interference studies program, which complies with the FCC mandated application-processing guidelines for digital television. This software is in accordance with the standards established in the FCC Public Notice #3060-0841 pertaining to DTV studies and DTV application preparation dated August 10, 1998.

Initial spacing studies, which considered DTV allotments (allot), DTV/NTSC licenses (lic), DTV/NTSC construction permits (cp), DTV/NTSC applications (app) and Class A/Class A-eligible low power television (LPTV) stations in the applicable areas surrounding Stone Mountain, GA revealed that VHF Channel 4 was a possible option for the GPTC station. After the spacing studies were completed additional studies were conducted to verify that the proposed station met the principal community coverage requirements of §73.625(a) located in the Federal Communications Commission's (FCC) rules. Exhibit 11 depicts the proposed WGTV-DT F(50,90) 28dBuV/m noise limited contour and verifies that the proposed station's noise limited contour fully encompasses the assigned principal community of Athens, GA. After it was determined that the principal community coverage requirement was met, we performed detailed interference studies on all applicable surrounding stations using the terrain dependent Longley-Rice, point-to-point propagation algorithm which is detailed in the FCC's Office of Engineering and Technology Bulletin Number 69 (OET 69).

The initial interference studies predicted that the proposed WGTV-DT may cause interference to the stations listed below (Exhibit 12) and therefore, are the stations we performed detailed interference studies on to verify that all interference remains within the *de minimis* standard:

- WMAZ-DT (PFRM APP)
- WYFF-TV (LIC)
- WTVY-TV (LIC)
- WSMV-TV (LIC)

Exhibit 12 is a pictorial view of all applicable surrounding stations that are predicted to receive interference from WGTV-DT using the proposed azimuth pattern with an ERP of 3kW at an antenna R/C HAAT of 304.0 meters. Exhibit 12A is a tabular exhibit which identifies the potential stations that may receive interference from the proposed WGTV-DT, including Class A and Class A-eligible LPTV stations. Since this study did not take masking into account, each station was studied in detail in order to determine the exact amount of *unique interference*[2] caused to each station from the proposed WGTV-DT.

NOTE: Starting from Exhibit 12, each pictorial exhibit will also be followed by a tabulation exhibit. For example, Exhibit 15 will be a pictorial exhibit and Exhibit 15A will be a tabulation exhibit.

Exhibits 13 and 14 are studies showing interference from all stations to the WMAZ-DT PFRM application without and with WGTV-DT respectively. Exhibit 13 shows that without WGTV-DT, populations of zero (0.0) people are receiving DTV only interference and the interference free population is 682,759. Exhibit 14 shows that with WGTV-DT, populations of 88,739 people are receiving DTV only interference and the interference free population is 594,020. Therefore, the proposed WGTV-DT causes [682,759 (IX free without WGTV-DT) – 594,020 (IX free with WGTV-DT) = 88,739] interference to a total of 88,739 people. Exhibits 13 and 14 calculated the proposed WMAZ-DT Channel 4 station's baseline population to be 712,882. Therefore, the total amount of unique interference caused by the proposed WGTV-DT is [88,739/712,882] 12.4%, which is not less than 2.0% and therefore does not comply with the 2% de minimis threshold requirement. Since the WMAZ-DT PFRM application is still a pending application, it has been established that the proposed WGTV-DT Channel 4 will enter into a mutually exclusive status with the pending WMAZ-DT Channel 4 PFRM application.

Exhibits 15 and 16 are studies showing interference from all stations to the WYFF-TV (lic) station without and with WGTV-DT respectively. Exhibit 15 shows that without WGTV-DT, populations of 26,189 people are receiving DTV only interference and the interference free population is 1,756,925. Exhibit 16 shows that with WGTV-DT, populations of 69,259 people are receiving DTV only interference and the interference free population is 1,713,855. Therefore, WGTV-DT causes [1,756,925 (IX free without WGTV-DT) – 1,713,855 (IX free with WGTV-DT) = 43,070] interference to a total of 43,070 people. Exhibits 15 and 16 calculated the WYFF-TV baseline population to be 2,191,475. Therefore, the total amount of unique interference caused by WGTV-DT is [43,070/2,191,475] 1.97 ≤ 2.0% and thus, all requirements under the definition of *de minimis* have been met. Exhibit 16 concludes that the total interference caused to WYFF-TV from all stations including WGTV-DT is [69,259/2,191,475] 3.16% ≤ 10% and thus, all requirements under the definition of the *10% de-minimis* standard have been met.

Exhibits 17 and 18 are studies showing interference from all stations to the WTVY-TV (lic) station without and with WGTV-DT respectively. Exhibit 17 shows that without WGTV-DT, populations of 2,954 people are receiving DTV only interference and the interference free population is 765,787. Exhibit

[2] Unique interference is defined as the predicted interference a DTV station would cause beyond the amount of interference "built into" the DTV allotment table.